



Kansas City

An Independent Licensee of the Blue Cross and Blue Shield Association

Neural Therapy

Policy Number: 2.01.85

Last Review: 2/2019

Origination: 2/2012

Next Review: 2/2020

Policy

Blue Cross and Blue Shield of Kansas City (Blue KC) will not provide coverage for neural therapy. This is considered investigational.

Please note: The following services performed with neural therapy will be denied per the benefit exclusion as related to the non-covered investigational procedure. These services include, but are not limited to: ultrasound imaging, nerve conduction studies, ultrasound guidance for the injection, vasopneumatic compression and neuromuscular rehabilitation.

When Policy Topic is covered

Not Applicable

When Policy Topic is not covered

Neural therapy is considered **investigational** for all indications.

Considerations

Neural therapy should be distinguished from the use of peripherally injected anesthetic agents for nerve blocks or local anesthesia. The site of the injection for neural therapy may be located far from the source of the pain or injury. The length of treatment can vary from one session to a series of sessions over a period of weeks or months.

Description of Procedure or Service

Populations	Interventions	Comparators	Outcomes
Individuals: <ul style="list-style-type: none"> • With chronic pain or illness 	Interventions of interest are: <ul style="list-style-type: none"> • Neural therapy 	Comparators of interest are: <ul style="list-style-type: none"> • Standard medical management 	Relevant outcomes include: <ul style="list-style-type: none"> • Symptoms • Functional outcomes • Quality of life • Medication use • Treatment-related morbidity

Neural therapy involves the injection of a local anesthetic such as procaine or lidocaine into various tissues such as scars, trigger points, acupuncture points, tendon and ligament insertions, peripheral nerves, autonomic ganglia, the epidural

space and other tissues to treat chronic pain. Neural therapy has been proposed for other chronic illness syndromes such as allergies, infertility, tinnitus, depression, and chronic bowel problems. When the anesthetic agent is injected into traditional acupuncture points, this treatment may be called neural acupuncture.

For individuals who have chronic pain or illness (eg, pain, allergies, hay fever, headaches, arthritis, asthma, hormone imbalances, libido, infertility, tinnitus, chronic bowel problems, sports or muscle injuries, gallbladder, heart, kidney, or liver disease, dizziness, depression, menstrual cramps, skin and circulation problems) who receive neural therapy, the evidence includes small randomized trials and a large case series. Relevant outcomes are symptoms, functional outcomes, quality of life, medication use, and treatment-related morbidity. There are few English-language reports assessing the use of neural therapy for pain, and the available studies have methodologic limitations that preclude conclusions on efficacy. The evidence is insufficient to determine the effects of the technology on health outcomes.

Background

The practice of neural therapy is based on the belief that energy flows freely through the body. It is proposed that injury, disease, malnutrition, stress, and scar tissue disrupt this flow, creating disturbances in the electrochemical function of tissues and energy imbalances called "interference fields." Injection of a local anesthetic is believed to reestablish the normal resting potential of nerves and flow of energy. Alternative theories include fascial continuity, the ground (matrix) system, and the lymphatic system. (1)

There is a strong focus on treatment of the autonomic nervous system, and injections may be given at a location other than the source of the pain or location of an injury. Neural therapy is promoted mainly to relieve chronic pain. It has also been proposed to be helpful for allergies, hay fever, headaches, arthritis, asthma, hormone imbalances, libido, infertility, tinnitus, chronic bowel problems, sports or muscle injuries, gallbladder, heart, kidney, or liver disease, dizziness, depression, menstrual cramps, and skin and circulation problems.

Rationale

This evidence review was created in December 2011 and has been updated regularly with searches of the MEDLINE database. The most recent literature update was performed through September 4, 2018.

Evidence reviews assess the clinical evidence to determine whether the use of a technology improves the net health outcome. Broadly defined, health outcomes are length of life, quality of life, and ability to function—including benefits and harms. Every clinical condition has specific outcomes that are important to patients and to managing the course of that condition. Validated outcome measures are necessary to ascertain whether a condition improves or worsens;

and whether the magnitude of that change is clinically significant. The net health outcome is a balance of benefits and harms.

To assess whether the evidence is sufficient to draw conclusions about the net health outcome of a technology, two domains are examined: the relevance and the quality and credibility. To be relevant, studies must represent one or more intended clinical use of the technology in the intended population and compare an effective and appropriate alternative at a comparable intensity. For some conditions, the alternative will be supportive care or surveillance. The quality and credibility of the evidence depend on study design and conduct, minimizing bias and confounding that can generate incorrect findings. The randomized controlled trial is preferred to assess efficacy; however, in some circumstances, nonrandomized studies may be adequate. Randomized controlled trials are rarely large enough or long enough to capture less common adverse events and long-term effects. Other types of studies can be used for these purposes and to assess generalizability to broader clinical populations and settings of clinical practice.

Neural Therapy

Neural therapy is an alternative medicine modality that was developed in Germany and is most commonly reported in Europe. Most of the literature on neural therapy consists of non-English-language publications.

Clinical Context and Therapy Purpose

The purpose of neural therapy in patients who have chronic pain or illness is to provide a treatment option that is an alternative to or an improvement on existing therapies.

The question addressed in this evidence review is: Does the use of neural therapy improve the net health outcome in patients with chronic pain or illness?

The following PICOTS were used to select literature to inform this review.

Patients

The relevant population of interest is individuals with chronic pain or illness.

Interventions

The therapy being considered is neural therapy.

Comparators

The following practice is currently being used to treat chronic pain or illness: standard medical management.

Outcomes

The general outcomes of interest are improvements in functional outcomes and reductions in pain or illness as well as medication use.

Timing

Follow-up varies by indication and by the number of injections required. Treatment may require a single or series of anesthetic injections over weeks or months.

Setting

Neural therapy injections are administered in an outpatient setting.

Randomized Controlled Trials

Hui et al (2012) reported a nonblinded randomized controlled trial of complementary and alternative medicine for chronic herpes zoster-related pain.² The 59 patients included in the trial had a confirmed diagnosis of herpes zoster of at least 30 days in duration (median, 4.8 months; range, 1 month to 15 years) and with at least moderate postherpetic neuralgia pain (≥ 4 on a 10-point Likert scale). The therapy included 3 weeks of neural therapy (injection of 1% procaine at up to 6 points along the affected dermatome) along with other therapies from traditional Chinese medicine (ie, acupuncture, cupping and bleeding, Chinese herbs) and meditation. A wait-list control group received the same treatment beginning 3 weeks after randomization. Intention-to-treat analysis of pain scores at 3 weeks showed significant improvement in the complementary and alternative medicine group (baseline, 7.5; posttreatment, 2.3), with little change in the wait-list control group (baseline, 7.8; 3 weeks, 7.2). A reduction in pain of at least 50% was observed in 66.7% of patients in the treatment group compared with 8.7% in the control group. In the 56% of patients who responded to a questionnaire after 1 to 2 years, 78.8% reported continued relief of pain. Interpretation of the results is limited by the multiple interventions provided and the possibility of a placebo effect in this nonblinded study.

One English-language report by Gibson and Gibson (1999) described a small double-blind, randomized, placebo-controlled crossover trial in 21 patients with multiple sclerosis.³ Anesthetic or saline was injected at acupuncture points in the ankle and at 14 or 15 points around the circumference of the head. Patients received 2 injections of anesthetic or saline in the first week; in the second week, all patients received anesthetic injections. At the end of the first week, 8 of 11 patients in the active treatment group and 1 of 10 in the placebo group had improved in 1 or more functions on the Kurtzke scale. Therapy was continued as needed for up to 3.5 years, with long-term improvements being reported in over 50% of patients.

Nonrandomized Trials

Egli et al (2015) reported on a series of 280 patients with chronic severe pain who had failed conventional medical measures.⁴ The most common reason for referral to the academic center in Europe was back pain, and more than two-thirds of patients had undergone physical therapy (PT), osteopathy, or chiropractic. After an average of 9.2 treatments (range, 1-40) in the first year, 126 patients reported that they were considerably better and 41 reported being pain-free. Of the 193 patients who were taking pain medications at the start of treatment, three-quarters had reduced pain medication or were taking no pain medication after 1 year.

A nonrandomized comparative study by Atalay et al (2013) compared neural therapy (n=33) with PT (n=27) for the treatment of chronic low back pain.⁵ The average duration of symptoms before treatment was 13.78 months. Patients who had not previously been treated with PT were assigned to the PT group, and patients who had previously failed PT were assigned to the neural therapy group. PT consisted of exercises, hot pack, ultrasound, and transcutaneous electrical nerve stimulation over 15 sessions. Neural therapy consisted of anesthetic injection into scars, trigger points, and acupuncture points over 5 sessions. Outcome measurements included the visual analog score for pain, the Roland-Morris Disability Questionnaire for disability, the Nottingham Health Profile for quality of life, and the Hospital Anxiety Depression Scale for depression, anxiety, and quality of life. The neural therapy group exhibited greater disability and worse quality of life at baseline. Both groups improved over time, and there was greater improvement in the neural therapy group on some of the outcome measures. Interpretation of this study is limited due to lack of randomized treatment assignment, lack of comparability between groups at baseline, and lack of a placebo control.

Schmittinger et al (2011) reported on a case of brainstem hemorrhage following neural therapy for decreased libido.⁶

Summary of Evidence

For individuals who have chronic pain or illness (eg, pain, allergies, hay fever, headaches, arthritis, asthma, hormone imbalances, libido, infertility, tinnitus, chronic bowel problems, sports or muscle injuries, gallbladder, heart, kidney, or liver disease, dizziness, depression, menstrual cramps, skin and circulation problems) who receive neural therapy, the evidence includes small randomized trials and a large case series. Relevant outcomes are symptoms, functional outcomes, quality of life, medication use, and treatment-related morbidity. There are few English-language reports assessing the use of neural therapy for pain, and the available studies have methodologic limitations that preclude conclusions on efficacy. The evidence is insufficient to determine the effects of the technology on health outcomes.

Supplemental Information

Practice Guidelines and Position Statements

The American Association of Orthopaedic Medicine has described neural therapy on its website and provides a link for instructional courses on the procedure.⁷

U.S. Preventive Services Task Force Recommendations

Not applicable.

Medicare National Coverage

There is no national coverage determination. In the absence of a national coverage determination, coverage decisions are left to the discretion of local Medicare carriers.

Ongoing and Unpublished Clinical Trials

A search of ClinicalTrials.gov in October 2018 did not identify any ongoing or unpublished trials that would likely influence this review.

References

1. Frank BL. Neural therapy. *Phys Med Rehabil Clin N Am.* Aug 1999;10(3):573-582, viii. PMID 10516978
2. Hui F, Boyle E, Vayda E, et al. A randomized controlled trial of a multifaceted integrated complementary-alternative therapy for chronic herpes zoster-related pain. *Altern Med Rev.* Mar 2012;17(1):57-68. PMID 22502623
3. Gibson RG, Gibson SL. Neural therapy in the treatment of multiple sclerosis. *J Altern Complement Med.* Dec 1999;5(6):543-552. PMID 10630348
4. Egli S, Pfister M, Ludin SM, et al. Long-term results of therapeutic local anesthesia (neural therapy) in 280 referred refractory chronic pain patients. *BMC Complement Altern Med.* Jun 27 2015;15:200. PMID 26115657
5. Atalay NS, Sahin F, Atalay A, et al. Comparison of efficacy of neural therapy and physical therapy in chronic low back pain. *Afr J Tradit Complement Altern Med.* Oct 2013;10(3):431-435. PMID 24146471
6. Schmittinger CA, Schar R, Fung C, et al. Brainstem hemorrhage after neural therapy for decreased libido in a 31-year-old woman. *J Neurol.* Jul 2011;258(7):1354-1355. PMID 21286741
7. American Association of Orthopaedic Medicine. Neural Therapy. n.d.; <http://www.aaomed.org/Neural-therapy>. Accessed October 18, 2018.

Billing Coding/Physician Documentation Information

- 20550** Injection(s); single tendon sheath, or ligament, aponeurosis (eg, plantar "fascia")
- 20551** Injection(s); single tendon origin/insertion
- 20552** Injection(s); single or multiple trigger point(s), 1 or 2 muscle(s)
- 20553** Injection(s); single or multiple trigger point(s), 3 or more muscles
- 64400** Injection, anesthetic agent; trigeminal nerve, any division or branch
- 64402** Injection, anesthetic agent; facial nerve
- 64405** Injection, anesthetic agent; greater occipital nerve
- 64408** Injection, anesthetic agent; vagus nerve
- 64410** Injection, anesthetic agent; phrenic nerve
- 64413** Injection, anesthetic agent; cervical plexus
- 64415** Injection, anesthetic agent; brachial plexus, single
- 64416** Injection, anesthetic agent; brachial plexus, continuous infusion by catheter (including catheter placement)
- 64417** Injection, anesthetic agent; axillary nerve
- 64418** Injection, anesthetic agent; suprascapular nerve
- 64420** Injection, anesthetic agent; intercostal nerve, single
- 64421** Injection, anesthetic agent; intercostal nerves, multiple, regional block
- 64425** Injection, anesthetic agent; ilioinguinal, iliohypogastric nerves
- 64430** Injection, anesthetic agent; pudendal nerve
- 64435** Injection, anesthetic agent; paracervical (uterine) nerve
- 64445** Injection, anesthetic agent; sciatic nerve, single
- 64446** Injection, anesthetic agent; sciatic nerve, continuous infusion by catheter (including catheter placement)
- 64447** Injection, anesthetic agent; femoral nerve, single

- 64448** Injection, anesthetic agent; femoral nerve, continuous infusion by catheter (including catheter placement)
- 64449** Injection, anesthetic agent; lumbar plexus, posterior approach, continuous infusion by catheter (including catheter placement)
- 64450** Injection, anesthetic agent; other peripheral nerve or branch
- 64479** Injection(s), anesthetic agent and/or steroid, transforaminal epidural, with imaging guidance (fluoroscopy or CT); cervical or thoracic, single level
- 64480** Injection(s), anesthetic agent and/or steroid, transforaminal epidural, with imaging guidance (fluoroscopy or CT); cervical or thoracic, each additional level (List separately in addition to code for primary procedure)
- 64483** Injection(s), anesthetic agent and/or steroid, transforaminal epidural, with imaging guidance (fluoroscopy or CT); lumbar or sacral, single level
- 64484** Injection(s), anesthetic agent and/or steroid, transforaminal epidural, with imaging guidance (fluoroscopy or CT); lumbar or sacral, each additional level (List separately in addition to code for primary procedure)
- 64505** Injection, anesthetic agent; sphenopalatine ganglion
- 64508** Injection, anesthetic agent; carotid sinus (separate procedure)
- 64510** Injection, anesthetic agent; stellate ganglion (cervical sympathetic)
- 64517** Injection, anesthetic agent; superior hypogastric plexus
- 64520** Injection, anesthetic agent; lumbar or thoracic (paravertebral sympathetic)
- 64530** Injection, anesthetic agent; celiac plexus, with or without radiologic monitoring
- 96372** Therapeutic, prophylactic, or diagnostic injection (specify substance or drug); subcutaneous or intramuscular

There are no specific HCPCS codes for these local anesthetics when injected in this fashion (there is a code for IV lidocaine). The procedure would be reported using CPT codes for therapeutic injection such as:

20550: Injection(s); single tendon sheath, or ligament, aponeurosis (eg, plantar "fascia")

20551: Injection(s); single tendon origin/insertion

20552- 20553: Code range for injection(s); single or multiple trigger point(s)

64400-64450: Code range for injection, anesthetic agent into nerves

64479-64484: Code range for injection, anesthetic agent and/or steroid, transforaminal epidural, with imaging guidance by spinal region

64505-64530: Code range for injection, anesthetic agent into autonomic nerves/ganglia

96372: Therapeutic, prophylactic, or diagnostic injection (specify substance or drug); subcutaneous or intramuscular

An unlisted CPT code such as 99199 may also be used.

Additional Policy Key Words

N/A

Policy Implementation/Update Information

- 2/1/12 New policy; considered investigational.
 - 2/1/13 Policy clarified regarding other services performed in conjunction with neural therapy.
 - 2/1/14 No policy statement changes.
 - 2/1/15 No policy statement changes.
 - 2/1/16 No policy statement changes.
 - 2/1/17 No policy statement changes.
 - 2/1/18 No policy statement changes.
 - 2/1/19 No policy statement changes.
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